In the claims:

Please add the following claims:

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10. 1. An apparatus enabling mixed-mode execution of a subject computer program in an object-oriented programming environment, the subject computer program comprising a set of source code instructions and a set of byte code instructions compiled from the source code instructions, comprising

a source code instruction processor (SCIP) operable to execute source code instructions;

a bridge class enabling addition of new classes to the SCIP;

a memory storing state information for the SCIP and the subject computer program;

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a byte code instruction processor (BCIP) operable to execute byte code instructions and retrieve, store, and/or modify data stored in the memory;

wherein the BCIP is operable to execute the SCIP and the subject computer program;

wherein the SCIP is operable to identify class members in the source code instructions of the subject computer program; wherein the SCIP is operable to extend the bridge class with methods allowing access to identified class members; and

wherein the SCIP is operable to interpret a source code instruction and invoke methods in an instantiation of the bridge class to access required class or object attributes.

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11. 2. The apparatus of claim 10 1 wherein the SCIP is operable to transfer execution of the subject computer program to the BCIP; and wherein the BCIP is operable to transfer execution of the subject computer program to the SCIP.

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12. ~~3.~~ The apparatus of claim ~~1~~ 10 wherein the SCIP is operable to profile the source code and associate an index value to each class member.

Rl.126 13. ~~4.~~ The apparatus of claim ~~3~~ 12 wherein the SCIP is operable to extend the bridge class with methods calling to each class member.

Rl.126 14. ~~5.~~ The apparatus of claim ~~4~~ 13 wherein the index value of each class member is associated with the corresponding method in the bridge class.

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Rl.126 15. ~~6.~~ The apparatus of claim ~~5~~ 14 wherein the methods in the bridge class are callable with reference to the associated index value.

Rl.126 16. ~~7.~~ The apparatus of claim ~~3~~ 12 wherein the SCIP is operable to inspect the source code and, as to each class in the source code, index all necessary fields, methods, and constructors.

Rl.126 17. ~~8.~~ The apparatus of claim ~~7~~ 16 wherein the SCIP is operable to extend the bridge class with methods calling to the fields, methods, and constructors of each class.

Rl.126 18. ~~9.~~ The apparatus of claim ~~1~~ 10 wherein the byte code instruction processor is a virtual machine, and wherein the memory is a component of the virtual machine.

Rl.126 19. ~~10.~~ The apparatus of claim ~~9~~ 18 wherein the virtual machine further comprises a memory management component, a thread scheduling component, and a thread synchronization component; and wherein the virtual machine is operative to execute byte code instructions to cause the memory management component, thread scheduling component or the thread synchronization component to perform tasks associated with data stored in the memory.

R1.126 20. ~~11.~~ The apparatus of claim 10 ~~1~~ wherein the SCIP transfers execution of the subject computer program to the BCIP by invoking a method in an instantiation of the bridge class, wherein the method is operative to invoke a corresponding method in the subject computer program.

R1.126 21. ~~12.~~ The apparatus of claim 10 ~~1~~ wherein the subject computer program includes a control transfer method inserted within a method associated with the subject computer program;

A2 X Cn.1 wherein the bridge class is extended to include a method calling to the control transfer method; and

wherein the SCIP is operative to transfer execution of the subject computer program to the BCIP upon execution of the control transfer method.

R1.126 22. ~~13.~~ The apparatus of claim 10 ~~1~~ wherein the byte code corresponding to the subject computer program includes at least one call to the SCIP; and

wherein the BCIP is operative to execute the call to the SCIP and transfer execution of the subject computer program to the SCIP.

R1.126 23. ~~14.~~ The apparatus of claim 22 ~~13~~ wherein the BCIP is operative to transfer the instruction associated with the call and any necessary parameters to the SCIP.

R1.126 24. ~~15.~~ A method allowing for mixed-mode execution of a subject computer program in an object-oriented programming environment, the subject computer program including source code instructions and byte code instructions compiled from the source code instructions, wherein a SCIP is operable to execute source code instructions of the subject computer program, wherein the SCIP includes an extendable bridge class allowing for the addition

of new classes to the SCIP, and wherein a BCIP is operable to execute the SCIP and the subject computer program, the method comprising the steps of

profiling the source code instructions of a subject computer program to identify the class members in the computer program; and,

extending the bridge class with methods allowing access to the class members.

R1.126 ~~25.~~ ~~16.~~ The method of claim ~~15~~ 24 wherein the profiling step comprises the steps of associating an index value to each class member.

R1.126 ~~26.~~ ~~17.~~ The method of claim ~~16~~ 25 wherein each index value comprises a letter.

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R1.126 ~~27.~~ ~~18.~~ The method of claim ~~16~~ 25 wherein each index value comprises a number.

R1.126 ~~28.~~ ~~19.~~ The method of claim ~~16~~ 25 wherein each index value comprises a symbol.

R1.126 ~~29.~~ ~~20.~~ The method of claim ~~16~~ 25 wherein the methods extending the bridge class are callable by reference to the respective index values.

R1.126 ~~30.~~ ~~21.~~ The method of claim ~~15~~ 24, further comprising the steps of

interpreting a source code statement;

executing the source code statement by accessing required class members through invocation of corresponding extending methods in the bridge class.

R1.126 ~~31.~~ ~~22.~~ The method of claim ~~16~~ 25, further comprising the steps of

interpreting a source code statement;

executing the source code statement by accessing required class members through invocation of corresponding extending methods in the bridge class.

R1.126 ~~32~~ 23. A method allowing for mixed-mode execution of a computer program by a SCIP and a BCIP, wherein a bridge class allows for addition of classes to the SCIP, wherein the bridge class includes a method calling to a first method in a subject computer program, the method comprising the steps of

determining at least one transfer point in the source code of the first method where control of execution of the first method may be transferred from the SCIP to the BCIP;

A2 Cn.X inserting, during compilation of the source code of the subject computer program, a control transfer method, wherein the transfer method is operable to execute the first method from the corresponding transfer point; and

extending the bridge class with a method calling to the control transfer method.

R1.126 ~~33.~~ 24. The method of claim ~~32~~ 23 wherein the control transfer method is inserted at the corresponding transfer point.

R1.126 ~~34.~~ 25. A method allowing for mixed-mode execution of a computer program by a SCIP and a BCIP, the method comprising the steps of

determining at least one transfer point in the source code of a first method where control of execution of the first method may be transferred from the BCIP to the SCIP;

inserting, during compilation of the source code, a call to the SCIP at each transfer point; wherein the call is operable to pass execution of the first method from the BCIP to the SCIP.

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~~26~~ 35. The method of claim ~~25~~ 34 wherein the call passes the instruction associated with the transfer point and any necessary parameters to the SCIP.

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~~27~~ 36. The method of claim ~~26~~ 34 wherein the call is conditioned on a process operative to determine whether control should be transferred.

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~~28~~ 37. A method allowing for mixed-mode execution of a computer program in an object-oriented programming environment, the computer program including source code instructions and byte code instructions compiled from the source code instructions, wherein a SCIP is operable to execute source code instructions, wherein the SCIP includes a bridge class allowing for the addition of new classes, and wherein a BCIP is operable to execute byte code instructions, the method comprising the steps of

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profiling the source code instructions to identify the attributes of each class in the computer program;

extending the bridge class to refer to the attributes of each class;

determining at least one transfer point in the source code of a first class where control of execution of the first class may be transferred from the BCIP to the SCIP; and

inserting, during compilation of the source code instructions into byte code instructions, control transfer calls to the SCIP at each transfer point; wherein each control transfer is operable to transfer execution of the computer program from the BCIP to the SCIP.

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~~29~~ 38. The method of claim ~~28~~ 37 wherein each control transfer call passes the instruction associated with the transfer point and any necessary parameters.

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~~30~~ 39. The method of claim ~~28~~ 37 further comprising the steps of